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NOTES.

1

PROF. SMITH remarks with reference to his paper on Rectilinear Asymptotes that the last line of article 4 should read "and β_∞ from $\beta = -\dfrac{f_1}{\frac{df}{d\mu}}$;" and that in editorial note on this article β_∞ must be determined, not as in the passage cited, but from the equation

$$\frac{d^2f}{d\mu^2}\beta^2 + 2\frac{df_1}{d\mu}\beta + 2f_2 = 0.$$

2

PROF. G. S. ELY, of Buchtel College, Ohio, sends the following properties of the periodic continued fractions equivalent to the square roots of integers. Such fractions are written with the denominators of the repetend in square brackets annexed to the integral part. Thus

$$\sqrt{7} = 2\,[1, 1, 1, 4] = 2 + \frac{1}{1+}\,\frac{1}{1+}\,\frac{1}{1+}\,\frac{1}{4+}\,\frac{1}{1+}\cdots$$

1. If $2n$ contains p,

$$\sqrt{(n^2 + p)} = n\left[\frac{2n}{p},\ 2n\right],$$

$$\sqrt{(n^2 - p)} = (n - 1)\left[1,\ \frac{2n}{p} - 2,\ 1,\ 2n - 2\right].$$

2. If $n - 1$ contains 2,

$$\sqrt{(n^2 + 4)} = n\left[\frac{1}{2}(n - 1),\ 1,\ 1,\ \frac{1}{2}(n - 1),\ 2n\right],$$

$$\sqrt{(n^2 - 4)} = (n - 1)\left[1,\ \frac{1}{2}(n - 3),\ 2,\ \frac{1}{2}(n - 3),\ 1,\ 2n - 2\right].$$

3. If $n - 1$ contains 3,

$$\sqrt{(n^2 + n + 1)} = n\left[1,\ 1,\ \frac{2n - 2}{3},\ 1,\ 1,\ 2n\right],$$

$$\sqrt{\left(n^2 + \frac{2n + 1}{3}\right)} = n\,[2,\ 1,\ n - 1,\ 1,\ 2,\ 2n],$$

$$\sqrt{\left(n^2 + \frac{4n + 2}{3}\right)} = n\,[2,\ 1,\ n,\ 1,\ 2,\ 2n].$$